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APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED. A Combined Arms Reorganization of U.S. Maneuver Battalions in CENTAG

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Final Report - 6 June 1975



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The purpose of the study was to determine the feasibility of reorganizing U.S. maneuver battalions, in Central Europe, into combined arms units to make them more effective in the defense.

The present situation in Central Europe mandates that significant improvement be realized in the integration of all U.S. maneuver battalion weapons systems, and the rejuvenation of combined arms operations and training be accomplished while maintaining present personnel ceilings.

Building on the assumptions that U.S. forces in CENTAG must win the first battle and that they have a unique defensive mission, new battalions based on the combined arms concept beginning at platoon level were developed.

A Dragoon battalion was designed to replace a mechanized battalion, and a Fusileer battalion was designed to replace an armor battalion. The Dragoon battalion is composed of two light Dragoon companies and a heavy Dragoon company. The light Dragoon company has two light Dragoon platoons, each having three APC's and two tanks, and one heavy Dragoon company has two APC's and three tanks. The heavy Dragoon company has two heavy Dragoon platoons and one light dragoon platoon. All companies in the Dragoon battalion have a weapons platoon composed or a mortar section with three 81mm mortars and an antitank section with two TOW's. The Fusileer battalion has three Fusileer companies, each with four Fusileer platoons. The Fusileer platoons are composed of three tanks and one APC.

The Dragoon and Fusileer battalions were analyzed according to their operational and fire power characteristics. This was then compared to present forces based on the assumption that there are 25 mechanized and 23 armor battalions in Central Europe, organized under TOE 7-45H(C5) and 17-35H(C5), respectively. The Dragoon and Fusileer battalions reflected significant advantages. They possess a remarkable fire power capability, particularly in antitank fires. Their congruent organization greatly enhances combat effectiveness, operational employment, and combined arms training. They maintain existing personnel ceilings while substantially increasing the number of fully-crewed tanks in Central Europe.

The study concludes that maneuver battalions in Central Europe should be reorganized into Dragoon and Fusileer battalions as proposed.

TABLE OF CONTENTS

| • | | | Page |
|---|--------------------------|-----|------------|
| LIST OF | TABLES | • | . iv |
| Chapter | , | | |
| 1. | INTRODUCTION | • | . 1 |
| | Statement of Problem | • | . 1 |
| | Issues Addressed | • | . 1 |
| | Assumptions | | . 1 |
| 2. | METHODOLOGY | • | • 3 |
| | General | • | • 3 |
| | Approach | • (| • 5 |
| | Format | • (| • 6 |
| 3. | ORGANIZATIONAL STRUCTURE | • • | 7 |
| | Organization | | 7 |
| | Personnel and Equipment | | 10 |
| 4. | FIRE POWER ANALYSIS | | 12 |
| | General | | 12 |
| | Models | | 14 |
| | Methodology. | | 15 |
| | Conclusions | | 1 6 |
| 5. | OPERATIONAL ANALYSIS | • | |
| | Combat Elements | • | 18 |
| | Combat Support | • | 18 |
| | | • | 20 |

| Chapter | | Page |
|---------|---|------|
| | Combat Service Support | 21 |
| 6. | CONCLUSION | 23 |
| | Conclusions | 23 |
| | Recommendation | 24 |
| APPENDI | XES | |
| Α. | DRAGOON BATTALION ORGANIZATION | 25 |
| В. | FUSILEER BATTALION ORGANIZATION | 44 |
| C. | FIRE POWER COMPUTATIONS | 57 |
| D. | TOTAL FIRE POWER COMPARISON | 62 |
| E. | GROUPED FIRE POWER COMPARISON | 64 |
| F. | FIRE POWER COMPARISON SUMMARY. | 66 |
| NOTES. | • | 68 |
| BIBLIOG | RAPHY | 71 |

LIST OF TABLES

| Tabl | е | | | | | | | | | | | | | | , |] | Page | 2 |
|------|----|---------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|------|---|
| | 1. | Manning | Levels | • | • | • | • | • | • | • | • | • | • | • | • | | 10 | |
| | | Weapons | | | | | | | | | | | | | | | | |

Chapter 1

INTRODUCTION

Statement of Problem

To determine the feasibility of reorganizing U. S. maneuver battalions, in Central Europe, into combined arms units to make them more effective in the defense.

Issues Addressed

- 1. Maximum integration of all weapons systems found within present maneuver battalions
- 2. Improvement of combined arms operations and training
- 3. Reorganization of maneuver battalions in Central Europe within their present personnel ceilings

Assumptions

- 1. U. S. forces must win the first battle.
- 2. Combined arms employment is a proven military principle.
- 3. The organization of the present maneuver battalions in Central Europe is based on TOE 7-45H(C5) for mechanized infantry battalions

- and TOE 17-35H(C5) for armor battalions.
- 4. U. S. maneuver battalions in Central Europe maintain a singularly unique defensive combat mission to counter the Warsaw Pact threat.
- 5. The precedent for adoption of tailored
 U. S. forces in Central Europe has been set with the reorganization of the armored cavalry regiments.
- 6. U. S. forces in Central Europe are comprised of 25 mechanized battalions and 23 armor battalions.

Chapter 2

METHODOLOGY

General

In support of the DTAC NATO mini-study the Department of Tactics selected three officers with armor and infantry backgrounds to study the reorganization of U. S. maneuver forces in Central Europe. This group has had previous experience in Central Europe. group resolved to formulate a combined arms organization at battalion and lower levels to determine if such an organization would provide a more effective defense for Central Europe. The study is based on research and original thought. Comparisons were based on 25 mechanized battalions and 23 armor battalions presently comprising the U. S. maneuver battalions in Central Europe. In order to establish viable parameters and allow for flexibility in methods of employment, it was further assumed that the proposed units initially would be employed in a defensive posture. However, the proposed organization was not structured to eliminate the possibility of offensive action. On the contrary, it was organized to win the first battle and put the forces in position to exploit success.

To maximize the weapons system presently available in the maneuver battalions, integration of combined arms at the lowest level is necessary. Richard M. Ogorkiewicz supports this idea when he states, "What is really important is the acceptance of the principle that infantry combat vehicles and tanks are complementary and should always operate together."2

In Central Europe, emphasis is being placed on the combined arms concept.3 However, the present H series TOEs are based on pure armor and mechanized battalions with emphasis on employing the units in a task organized configuration. 4 Extensive time and money is being expended to develop and test the proper configuration. Such a test was conducted by the Fourth Mechanized Division from May to August 1974. The forces of other allied nations illustrate similar reorganizational trends. The Germans have combined tanks with mechanized squads to form panzergrenadier units.5 The trend has also been evident in the French mechanized regiment. 6 An effort directed toward the reorganization of the U. S. armored cavalry regiments in Central Europe is an indication that U. S. units are being officially tailored to the environment and mission required. 7 Many military analysts have long been recommending a permanent union of tank and mechanized forces. 8 Military journals publish many

articles by authors who set forth combined arms organization at many different levels. These authors also stress the need for training of combat arms leaders and eliminating branch parochialism. 10

In addition, emphasis is being directed to increasing the ratio of combat power to command head-quarters and support units. This action is called for by the Nunn Amendment as well as by many Congressmen and military analysts.11

Approach

The research group used a five-phase approach in formulating the proposed combined arms organization. The initial requirement was to determine reasons for the reorganization of the units to be used in the defense. The second phase was the development of a combined arms organization which would utilize existing weapons and equipment presently available in Central Europe. In the third phase, an analysis was conducted to determine the operational characteristics of the proposed organization. Following this, an analysis was made which compared the fire power characteristics of the proposed combined arms organization with those of present U. S. mechanized and armor battalions and units of the Warsaw Pact. The final phase determined the overall advantages and disadvantages of the proposed combined arms force.

Format

The following format is used in presenting this The subsequent section sets forth a detailed study. description of the proposed combined arms organizations at battalion and lower levels. Units above battalion level remain unchanged. The study then addresses the fire power characteristics of the proposed units by making a comparative analysis with those of present mechanized, armor, and Warsaw Pact units. The next section presents an analysis of the reasons for the new organization and the conceptualized operation of the combined arms units. The final section highlights the facts which support the reorganization of U. S. maneuver battalions in Central Europe and presents the recommendation of the research group. The appendixes provide supportive data for the text of the study. The bibliography lists references which were used to direct, influence, and reinforce the thinking of members of the research group in their individual and collective consideration of the operation and organization of the proposed combined arms units.

Chapter 3

ORGANIZATIONAL STRUCTURE

Organization

Two organizations are presented as replacements for the mechanized and armor battalions presently in Central Europe. In this study these two organizations are referred to as the Dragoon Battalion and the Fusileer Battalion. (Appendix A and B) These battalions have been formed through the integration of combined arms teams at the lowest level.

Basically there are two types of platoons in the companies of the Dragoon Battalion: a light Dragoon platoon and a heavy Dragoon platoon. In each of the light platoons there are three mechanized squads and a tank section of two tanks. A heavy Dragoon platoon is composed of two mechanized squads and a tank section of three tanks. A closer examination of the light Dragoon platoon shows that each mechanized squad contains nine men. The platoon leader and platoon sergeant are assigned to ride in armored personnel carriers(APC). The heavy Dragoon platoon is organized by placing the platoon leader in one of the three tanks and assigning the platoon sergeant to an APC. The organization of

the nine-man mechanized squad remains the same as the light platoon. The two light Dragoon companies of the Dragoon Battalion each have one heavy Dragoon platoon. The other type company in a Dragoon Battalion is a heavy Dragoon company which has two heavy Dragoon platoons and one light Dragoon platoon.

The weapons platoons for both the heavy and light Dragoon companies are organized in the same manner. In the platoon headquarters, the platoon leader and platoon sergeant operate in a 1 1/4 ton truck. Organic indirect fire support for the company is provided by an 81mm mortar section consisting of three 81mm mortar squads. An antitank section consists of two antitank squads, each armed with the Tube launched, Optically tracked, Wire guided missile(TOW) mounted on an APC.

The organization of the company headquarters for the light and heavy Dragoon companies is the same. The company commander has an APC as his primary vehicle. He is given this vehicle, instead of a tank or command and reconnaissance vehicle(Mll4Al), to standardize the equipment in the company and to provide additional space in his vehicle for extra radios, liaison personnel, and attached augmentation. The headquarters section of the Dragoon company has the First Sergeant, Commo Chief, and Armorer assigned to an APC. A 1/4 ton truck is provided for the Executive Officer and a 2 1/2 ton truck

for the supply section. In the maintenance section of the Dragoon company an APC, 1 1/4 ton truck, and a 2 1/2 ton truck provide transportation for maintenance personnel which include both track and turret mechanics. Vehicle, Track Recovery(VTR) is the primary recovery vehicle and can be used for both APCs and tanks.

The organization of the three Fusileer companies in a Fusileer Battalion is identical. Each Fusileer company has four platoons. Each Fusileer platoon has a tank section composed of three tanks and a mechanized squad. The platoon leader commands from a tank and the platoon sergeant is assigned to an APC. The mechanized squad is organized exactly the same as the mechanized squad found in the Dragoon platoons.

The headquarters and headquarters company of the Dragoon and Fusileer Battalions are organized in the same manner except that APCs are the command and control vehicles for the Dragoon command group and tanks for the Fusileer command group. The battalion maintenance platoon has a balanced recovery and maintenance capability for both tanks and APCs.

In both the Dragoon and Fusileer Battalions, the combat support companies have similar organizations which include a company headquarters, maintenance section, and an armored vehicle launched bridge(AVLB) section. The companies also have a ground surveillance

section, a Redeye section, and a scout platoon. One exception exists; the Dragoon Battalion has an antitank platoon composed of six antitank(TOW) sections while the combat support company of the Fusileer Battalion replaces the antitank platoon with a heavy mortar platoon.

Personnel and Equipment

Tables 1 and 2 below reflect the manning levels and weapons densities used in this study.

Table 1

| | MANNIN | G LEVELS | | |
|---------------|---------|-----------------|----------|-----------|
| Unit | Officer | Warrant Officer | Enlisted | Aggregate |
| Dragoon BN | 38 | 1 | 773 | 812 |
| Fusileer BN | 39 | 1 | 591 | 631 |
| Mechanized BN | 39 | 1 | 828 | 868 |
| Armor BN | 36. | 1 | 537 | 574 |

In the above table, data for Dragoon and Fusileer Battalions was derived from Appendix A and B. Data for the mechanized and armor battalions was derived from U. S. Army Armor Reference Data, Volume 1, January 1974.

Table 2

| WEAPONS DENSITY | | | | | | | | | | | |
|--|-----|-----------|----------|-----------|--|---|---|------|------|--------------|--|
| Type Model | M60 | M113 | M114 | TOW# | Dragor | ı LAW | 1 4.2' | 81mm | M60 | M201 | |
| Pure | | | | | | | | | | - | |
| Mech BN | - | <u>60</u> | 15 | 18 | 31 | 74 | 4 | 9 | 49 | 99 | |
| **Mech | | | | | | *************************************** | *************************************** | | | | |
| Task Force | 17 | 47 | 14 | 16 | 22 | 56 | 4 | 6 | 33 | 76 | |
| | | | | | | | ······································ | | | 70 | |
| Dragoon BN | 22 | 41 | 9 | 18 | 27 | 66 | | 9 | 23 | 86 | |
| ***Soviet | T62 | BMP | | Sagger | the state of the s | | 120mm | | PKSm | | |
| Mtz Inf TF | 10 | 30 | 4 | 32 | ź | 28 | 6 | | 27 | , | |
| And the state of t | | | | | | | | | | | |
| Armor BN | 54 | 9 | 9 | **** | 4 | *** | 4 | | 1 | 18 | |
| ****Armor | | | | | - | | | | | 10 | |
| Task Force | 37 | _17 | 10 | 2 | 13 | 38 | 4 | 3 | 17 | 41 | |
| 75. | | | | | | | | | | - Y JL | |
| Fusileer BN | 39 | 28 | 9 | are, step | 16 | 44 | 4 | | 13 | 41 | |
| Soviet | T62 | BMP | - | | - | | | | | _ | |
| Tank BN | 31 | 2 | | | | | | | *** | | |
| | | | | | - | | | | | | |

^{*}Includes carrier

In the above table, data for mechanized and armor battalions was derived from U. S. Army Armor Reference Data, Volume 1, January 1974; data for Dragoon and Fusileer Battalions from Appendix A and B; data for Soviet motorized rifle and tank battalions from ST 23-3-1, undated and Aggressor Forces Fact Sheet, USACGSC, 31 May 1974.

5

^{**}Mech Task Force contains 2 Mech Companies and 1 Tank Company.

^{***}Soviet Motorized Task Force contains 3 motorized companies and 1 Tank Company.

^{****}Armor Task Force contains 2 Tank Companies and 1 Mech Company.

Chapter 4

FIRE POWER ANALYSIS

General

In addressing the overall potential effectiveness of Dragoon and Fusileer Battalions, an analysis of the ability to generate fire power is of primary interest. As stated in FM 100-5(test), "The dominant factor of the modern battlefield is the range, accuracy, and target effect of modern weapons." 12 Fire power is the major ingredient of total combat power which is defined as "that total force, composed of destructive and disruptive forces, which a military unit can apply against an opponent".13

To aid in evaluating the potential effectiveness of Dragoon and Fusileer Battalions, numeric fire power values were developed and models constructed for maneuver battalions. Fire power scores were obtained from tables found in FM 105-5 and Combined Arms Combat Development Agency(CACDA), Manual. War Game (Jiffy) Methodology, July 1974. "These fire power scores are computed based on sustained rates of fire, effective width of burst, fragmentation area, and effectiveness of the weapon in comparison with other weapons."14

The individual fire power scores are not absolute and hold no particular credence when considered alone; however, they gain significance, and therefore usefulness, when compared to other scores within the same model. Likewise, any fire power groupings, or totals of a model, must be employed in a comparative mode to reflect relative discriminatory trends. Even then, care must be taken to ensure that the selective grouping developed and the comparisons made are realistic. For example when one tank is compared to one rifle, the resultant scores would be 32 for the tank and one for the rifle at less than 300 meters. This cannot logically be expanded to mean that 33 rifles would defeat one tank at the same range. On the other hand, if two organizations with similar weapons composition produced scores of 50 and 100 respectively, the magnitude of the difference in scores would reflect a numeric interpretation in their ability to generate total fire power.

The amassing of fire power scores is normally a preliminary step in the execution of a war game. In this study, the actual play of a war game model through the creation of critical incidents is not applicable since any outcomes would be a direct reflection of the specific tactics employed.

Models

The four basic force structure models analyzed were Dragoon, Fusileer, mechanized, and armor battalions. The mechanized and armor battalions were addressed in both pure and cross attached forms. When cross attached, each battalion was considered to have gained one pure maneuver company of the opposite arm while losing one organic maneuver company. For additional comparisons, fire power values were computed for models of a Soviet motorized rifle battalion and a tank battalion. Weapon density for these models is based on information derived from Special Text(ST) 23-3-1, undated and Aggressor Forces Fact Sheet, USACGSC, 31 May 1974.

In developing fire power scores for these models, the following assumptions were made:

- 1. The fire power scores within the headquarters and headquarters company of each battalion were not included in the computations since they were considered to have equal value.
- 2. Redeye weapons systems and caliber .45 pistols were not considered.
- 3. A basic load of two Light Antitank Weapons (LAW) per mechanized rifle squad and scout vehicle was used.
- 4. Within the antitank platoon of the combat support company, the fire power of each APC

- was considered separately from the TOW weapons system.
- 5. Three Dragon weapons systems were substituted for two 90mm recoilless rifles reflected in the mechanized platoon TOE.

Methodology

Fire power values were computed at ranges of 300, 500, 700, and 1000 meters for each weapon system as well as in aggregate for each model. (Appendix C) A comparison of average total fire power values at each range is at Appendix D.

In addition, it was felt that further analysis could be made by selective comparisons. To accomplish this certain related fire power values were grouped for each type battalion model. For example, to gain insight into the differences of armored vehicle power, a category of armored vehicle values was developed. In this grouping, only maneuver company tanks (M60A1) and APCs (M113A1) were considered. To judge antitank capabilities the category of antitank values was instituted. This category considers only tanks, TOWs, Dragons, and LAWs. Finally, the category of small arms values, which includes only ground mounted machine guns (M60), grenade launchers (M203), and individual rifles (M16), was established to evaluate respective dismounted fire power. A comparison of grouped fire power values is at Appendix E.

Conclusions

An analysis of a Dragoon Battalion compared to a mechanized battalion and a mechanized task force indicated the following data. (Appendix F) The Dragoon unit is approximately equal in total fire power to a mechanized battalion and distinctively more effective than a mechanized task force. It has greater armored vehicle fire power than either alternative with dramatically more power than a mechanized battalion and is superior to both in antitank fire power. Dragoon Battalion has less small arms fire power than a pure battalion, but about the same as a task force. In comparison to a Soviet motorized rifle battalion, the Dragoon Battalion is over one-third more powerful. In conclusion, a Dragoon Battalion offers equal or greater fire power in all areas, except small arms. Its most distinct advantages are in armored vehicle and antitank fire power.

An analysis of a Fusileer Battalion as compared to both an armor battalion and an armor task force reflects the following data. (Appendix F) The Fusileer Battalion has substantially greater total fire power than a battalion and approximately the same total fire power as a task force. It has less armored vehicle fire power than a battalion, but notably more than a task force and more antitank fire power than either.

The Fusileer Battalion has far greater small arms fire power than a battalion and about the same as a task force. Furthermore, it is almost two and one-half times as powerful as a Soviet tank battalion. In conclusion, a Fusileer Battalion offers equal or greater fire power than either of its present counterparts. It is clearly superior in armored vehicle fire power to a task force and has a distinct antitank fire power advantage over both.

Chapter 5

OPERATIONAL ANALYSIS

Combat Elements

In developing the Dragoon and Fusileer Battalions one problem addressed was to counter the Warsaw Pact threat. 15 The development of these battalions called for a reorganization that would improve unit comb t power but not reduce operational effectiveness. In conjunction with this reorganization, a need was established for a combined arms team at the lowest supportable level. This need is created by unit dispersion and limited mutual support on today's extended battlefield. This indicated that the integration of tanks and mechanized forces to form a combined arms unit is best accomplished in the platoon. The organization of the combined arms platoon allows for the closest coordination of all weapons systems that are available at company level. This same type of coordination has been effective in armored cavalry platoons for many years.

The Dragoon Battalion was designed to optimize a defensive capability. Its basic organization and concepts follow those of a mechanized battalion with

major changes occurring at platoon level with the introduction of tanks. The battalion's organization contains a mix of weapons that improves the fire power and staying power of the units, but does not increase its size. The battalion provides its commander and maneuver company commanders with the capability to influence the battle through the use of the heavy Dragoon company or heavy Dragoon platoons.

The Fusileer Battalion is designed to enhance the flexibility of division and brigade commanders by providing an organic tank heavy force. The companies within this battalion are unique in that they are composed of four combined arms platoons. This structure provides more flexibility with a better organic combat arms mix than is possible in present combined arms forces.

Eattalions will not cause major changes in present or proposed combined arms concepts, doctrine, and tactics. The missions of both armor and mechanized elements will remain the same. The close operational relationship between the members of these integrated teams will increase their effectiveness. The unit integrity of these combined arms elements will produce more effective teamwork and training, better qualified leaders, and improved battle results. The cross attachment of units as now practiced in Central Europe.makes effective

combined arms training within the platoon difficult to attain.

Combat Support

Combat support for both Dragoon and Fusileer Battalions will basically remain the same as in the standard maneuver battalions except in the areas of indirect fire and antitank support. Organic indirect fire support is required because of the flexibility and immediate response which it provides to the battle-The Dragoon Battalion has organic indirect fire support only at company level because of today's extended frontages. Duplication of mortars at battalion level is not required due to the relative ineffectiveness of high explosive ammunition against the Warsaw Pact threat. Still the mortars have the capability of providing illumination and smoke which is needed at company level. The Fusileer Battalion was organized with 4.2 inch mortars centralized at battalion level to provide the companies with an indirect fire support capability.

Organic to the combat support company of the Dragoon Battalion is an antitank platoon which provides additional antiarmor fires to the companies. A need for these fires was generated by the same extended defensive frontages and armor threat that guided the

organization of the antitank platoon within the present mechanized battalions. No antitank platoon was used within the combat support company of the Fusileer Battalion due to its preponderance of tanks.

These combined arms battalions, while operating in Central Europe, will require the AVLB section that is currently found in the tank battalion. The AVLB will improve the ability of these combined arms battalions to negotiate obstacles. The Redeye is the primary air defense weapons system in the Dragoon and Fusileer Battalions. This Redeye section will be organized in the same manner that is now found in the maneuver battalions. Other nonorganic combat support elements such as engineer, signal, and aviation units will support the combined arms battalions in the same manner as presently practiced in Central Europe.

Combat Service Support

Combat service support has always been a major problem area with the cross attachment of units.

Mechanized battalions cannot provide required support to an attached tank company in the areas of recovery, maintenance, and resupply. Similar problems face the mechanized company attached to a tank battalion. The problems further increase when platoons are attached to companies. These problems are caused by a lack of organic combat service support within the company.

Battalions eliminates these existing combat service support problems. Through the design of identical maintenance elements, the battalions have the capability to provide required maintenance support for both tank and mechanized forces. Increasing the maintenance capabilities does not increase the requirements for maintenance personnel. Present categories of maintenance will remain valid. With reorganization, ammunition and POL resupply problems are eliminated. The logistical interface and doctrine between these and supporting organizations remain as presently established.

Chapter 6

CONCLUSION

Conclusions

The reorganization of U. S. maneuver battalions in Central Europe into Dragoon and Fusileer Battalions resulted in significant advantages. The analysis of material presented in this study reflects the following major conclusions regarding this reorganization.

The proposed combined arms organizations possess a remarkable fire power capability. They accomplish this by maximizing the integration of all weapons systems found at battalion and lower levels. The Dragoon and Fusileer Battalions exceed or equal comparable units in total fire power. The salient point of this comparison is that their antitank fires are overwhelmingly superior to those of existing maneuver battalions. This is requisite for a successful defense against the Warsaw Pact threat.

Present methods of cross attachment between the maneuver battalions in Central Europe weaken unit integrity which detracts from the overall effectiveness of the task force. The configuration of the Dragoon and Fusileer

Eattalions will form a more congruent unit, thus improving combat effectiveness. This organization gives the battalions a capability of accomplishing more diversified missions without task organizing. These permanent combined arms battalions offer stability and increased effectiveness by providing the opportunity for combined arms training on a daily basis.

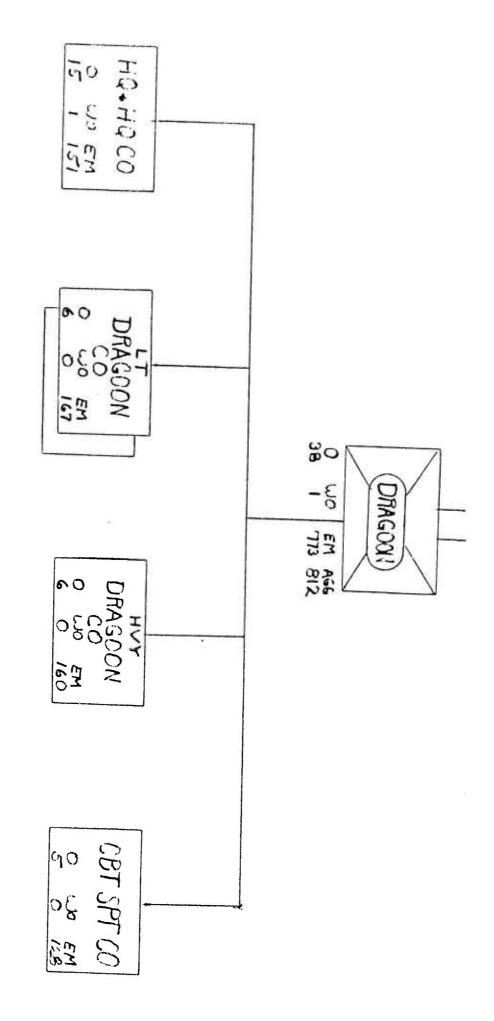
The combined arms organization results in reduced personnel requirements. The substitution of Dragoon Battalions for mechanized battalions and Fusileer Battalions for armor battalions requires 89 fewer personnel. Another advantage of the reorganization becomes obvious when equipment totals are compared. These totals indicate that, while maintaining the personnel ceilings, further advantages will be derived from the exchange of 38 APCs for 205 fully crewed tanks. This exchange will substantially increase the total combat power of forces in Central Europe.

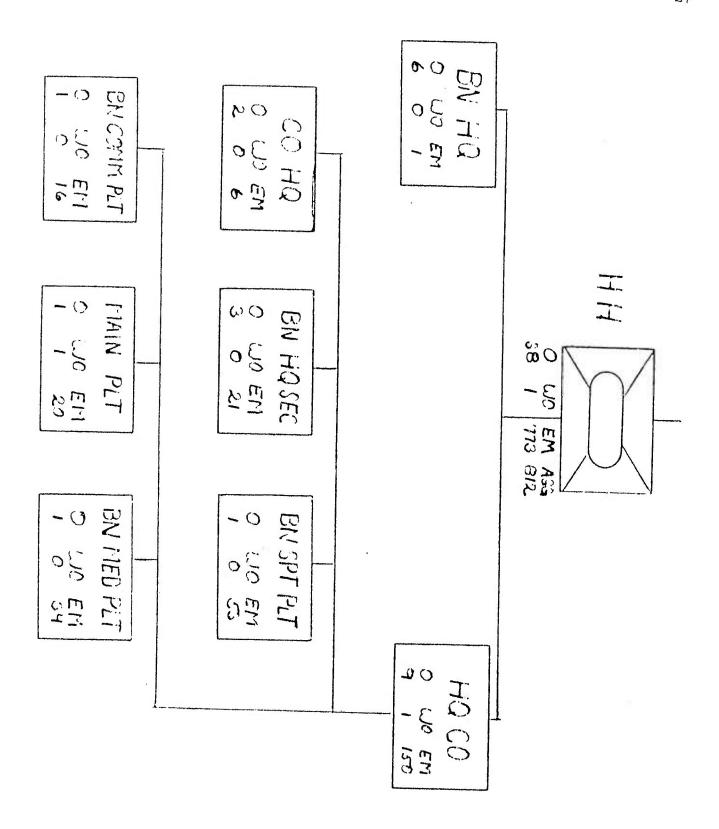
In conclusion, the reorganization of maneuver battalions in Central Europe into Dragoon and Fusileer Battalions is feasible and will produce a more effective defense.

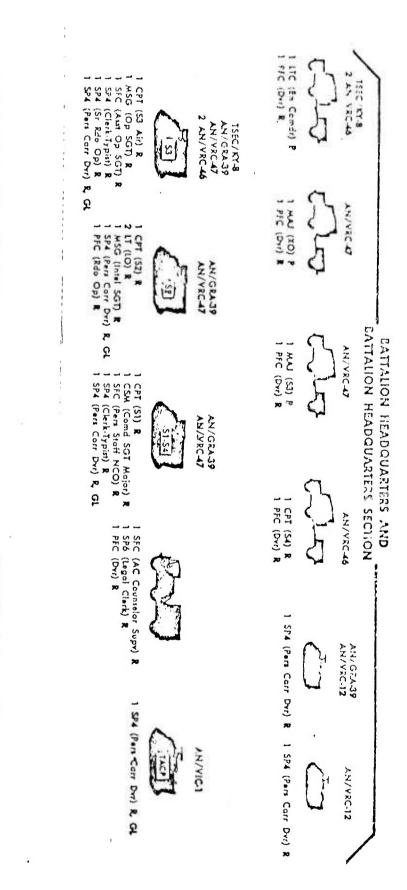
Recommendation

It is recommended that maneuver battalions in Central Europe be reorganized into Dragoon and Fusileer Battalions as proposed in this study.

APPENDIX A DRAGGON BATTALION ORGANIZATION







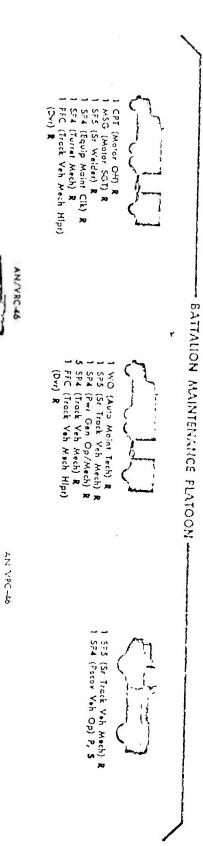
COMPANY HEADQUARTERS

AN/VRC-19
AN/V

COMMUNICATION PLATOON

ISEC/KY-1
AN/VRC-19
AN/GRA-39
AN/GRA-39
AN/GRA-39
AN/VSC-3
AN

2 PFC (Mug Clark) 1



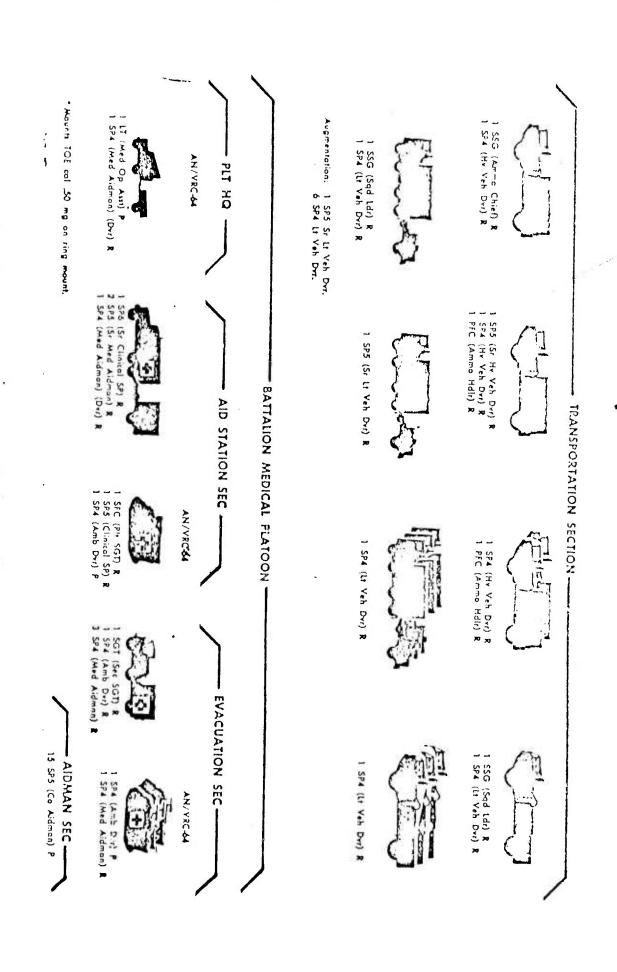
1 17 (Ph 1dr) (Aur Su) 1 1 FFC (Dw) 1 PLATOON HO-1 SFC (8h Sup SGT) # 2 SP4 (Sup SP) # 1 PFC (Sup CIL) # 1 PFC (Sup CIL) (Dw) # - SUPPLY SECTION -1 7.62·mm mg AN/PRC.77 - BATTALION SUPPORT PLATOON 1 SFC (food Src Sieward) R 1 SF6 (1st Cook) R 2 SF5 (1st Cook) R 1 SF4 (Cook) R 1 SF4 (Cook) (Orr) R HO TEAM -MESS SECTION-1 SFC (Food Src Shward) # 1 SP6 (In Cook) # 2 SP5 (In Cook) # 1 SP4 (Cook) # - COMPANY TEAMS -

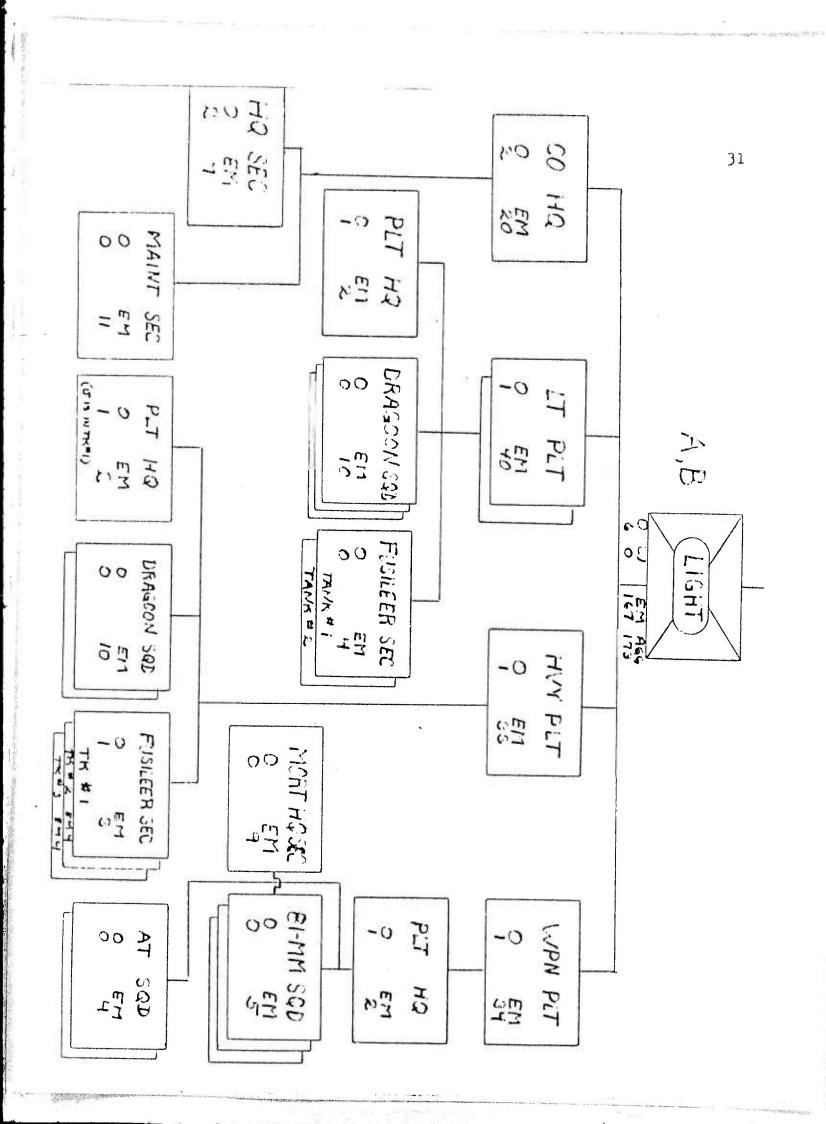
1 SGT (Recov SGT) R 1 SP5 (Sr Recov Vah Op) P. S 1 SP4 (Recov Vah Op) P. S

1 SP3 (Sr Recor Veh Op) P, S 1 SP4 (Recor Veh Op) P, S

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LIGHT DRAGOON COMPANY 2 PER EN

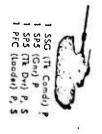
1 SFC (Motor SST) R
1 SP5 (Sr Track Yeh Mech) R
1 SP4 (The Torret Mech) R
1 SP4 (Track Yeh Mech) 1 SP4 (Pers Carr Dvr) R AN/VRO & AN GRASS SP4 (Recov Yah Op) P. S. SP4 (Recov Yah Op) P. S. 1 ISG (First Sergeant) R
1 SGT (Comm Chief) R
1 SP4 (Armarer) R, GL
1 SP4 (Pers Carr Drr) R AN/YRCL6 AN/YRC-77 MAINTENANCE SECTION -COMPANY HEADQUARTERS --HEADQUARTERS SECTION -SP5 (Sr Tk Turret Mech) R 1 SP4 (Equip Moint Clk) (Dvr) R 1 SP4 (Fld Rdo Mech) R PFC (Dvr) R, GL AN/VRC-17 AN/GRA-39 2 SP4 (Gen Veh Rpmn) R 1 SP4 (Tk Turret Mech) (Dvr) R 1 SSG (Sup SGT) R 1 SP5 (Unit Clerk) R 1 PFC (Sup Clk) R

LIFT L'AGCOV HATCOY

(**2**:53 co)

| 1 | V H | 2 | } | , | N | هسو | j | | | 5.5 |
|-------------------|-----------|-------------|--------------------------|----------------|-----------|------------|------------|---|------------|--|
| ١. | の正なり | 12 | SP4 | 1-1 | SEE | SS | 4.7 | | | |
| | (EG GEE)P | FIET:A | (ETO) R (DRAGON GNR)P | (PERS CARE DR) | (TE IDE)室 | Q, | R(GGT LT1) | | | PLATOCA HO 2 AN FRED AN FRED AN GROUN AN GROUN AN GROUN |
| | | | | | 2 | | } * | | | 1 |
| \ + | のはいので | FFC | 44S | SP4 | SITT | 5.85 | SEC | _ | |) |
| (GUENADIES) U) GE | ם ה | (BIFLEKAV)R | (ETO)B (DBACON GMR)P | (PEPS CARR DR) | (TH LDR)R | R(ECI OS) | (PLT SGT)R | | 1 | AN/PRIA AN/PRIA AN/PRIA |
| 7 | | 2 | | <u>,</u> | 2 | <u>سر</u> | | | | |
| t. | לבן ב | PFC | SP4 | 43S | SGT | 583 | | ^ | \ _ | _ 2d |
| (CHENADIEK)H,GL | (MG GNR)P | (HIFLEWAY)B | (ETC)R (DRAGON GNR)P | (FERS CARR DR) | | (SQD LDR)R | | | | ANIVECUA ANIVECUA ANIVECUA ANIVECES ANIVECES |





AN/VRC-64

REAVY DRANCON PLANCY

(1 PER CO)



1 IT (Pit Idr) P
1 SGT (Asst Tk Comdr) (Gnr) P
1 SP5 (Tk Dvr) P, S
1 PFC (Loader) P, S

1 SSG (Tk Comdr) P 1 SPS (Gnr) P 1 SPS (Tk Dvr) P, S 1 PFC (looder) P, S

AN VRC-64

ANTERO CA

1 SSG (Tk Comds) P 1 S25 (Gns) P 1 S25 (Tk Crs) P, S 1 PFC (loades) P, S

AN/VRC-64

AN/VRC 64 AN/VRC-47

(PLT SGT)R (SQD LDR)R (TM LDR)R (PER CARR DR) (RTO)R 12 12 14 SGT SGT SSG

SP4 SP4 SP4

(DRAGON GNR)P (RIFLEMAN)R (MG GNR)P SP4

NHNH

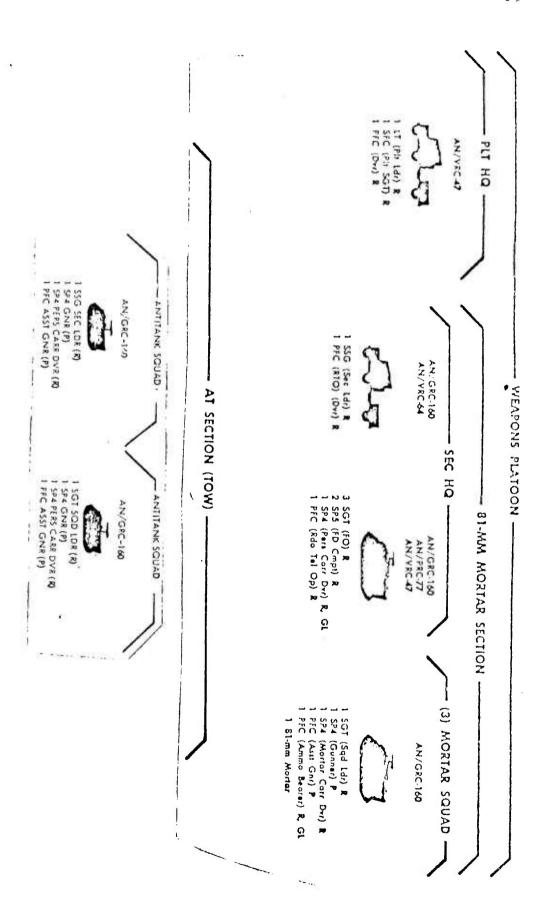
SP4 SP4 PFC SF4

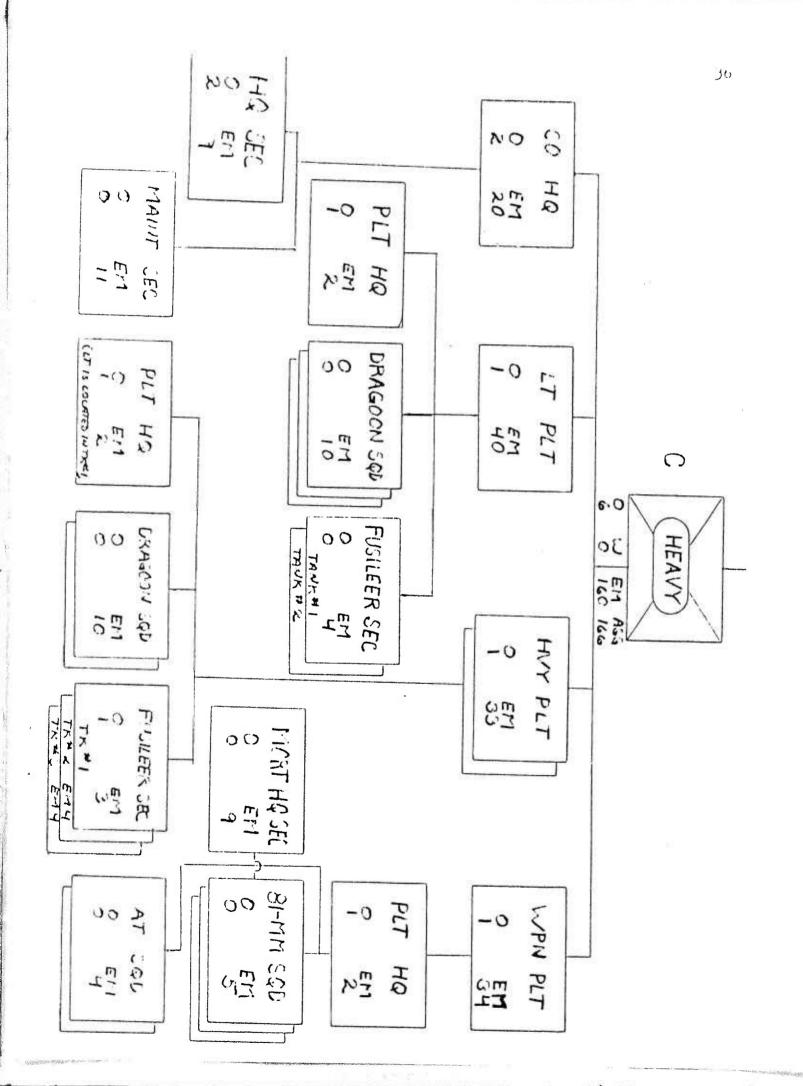
(GRENADIER)R,GL 2 PFC

(SQD LDR) R (TM LDR)R (PER CARR DR) (RTO)R (DRAGON GNR)P (BIFLEMAN)R (MG GUR)P

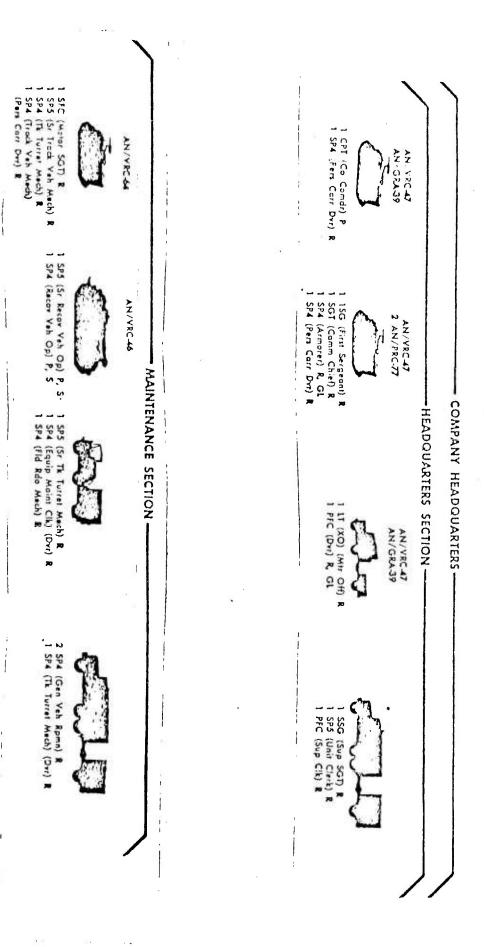
SP4

(GRENADIER)R, GL



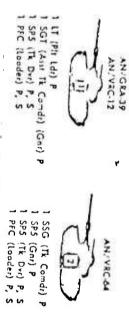


HEAVY DRAGOON COMPANY (1) PER BN

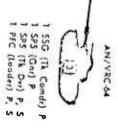


HEAVY DRAGOON FLATTON

(RPER Co) -







AN/VEC-64

AN/VRC 64 AN/VRC-17



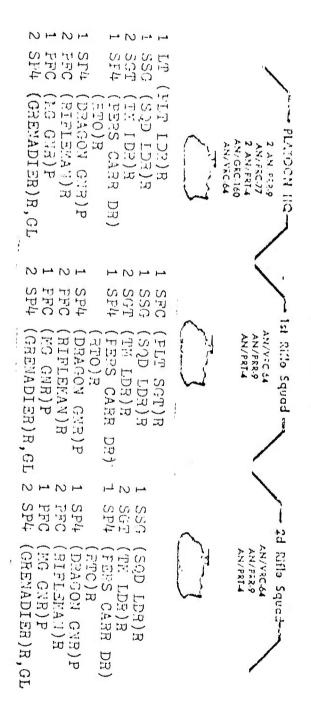
| 1 SFC (FLT SGT)R 1 SSG (SQD LDR)R 2 SGT (TM LDR)R 1 SP4 (PER CARR DR) 1 SP4 (DEAGON GNR)P 2 PFC (RIFLEMAN)R 1 SP4 (MG GNR)P 2 SP4 (GEENADIER)R,GL |
|---|
| HOM HOM |
| SP4 SP4 SP4 SP4 SP4 SP4 SP4 |
| 555555 |

| T, GL |) | | 7 | Í | 7 | | |
|-------|-------|--------|---------|---|-------|-----|-----|
| N | - | N | | | المسل | N | - |
| SP4 | thd S | PFC | SP4 | | 1 | SGT | SSG |
| DI | R)P | EMAN)R | ON GN | w | 3 | DR) | LDR |
| | | | | | | | |

(GRENADIER)R, GL

LUBE DEAGOON PLATEON

() PER CO)

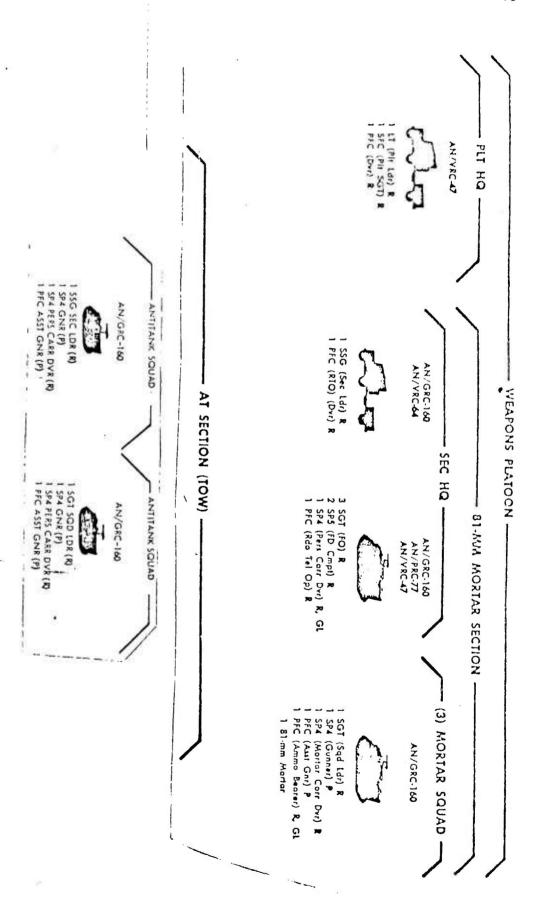


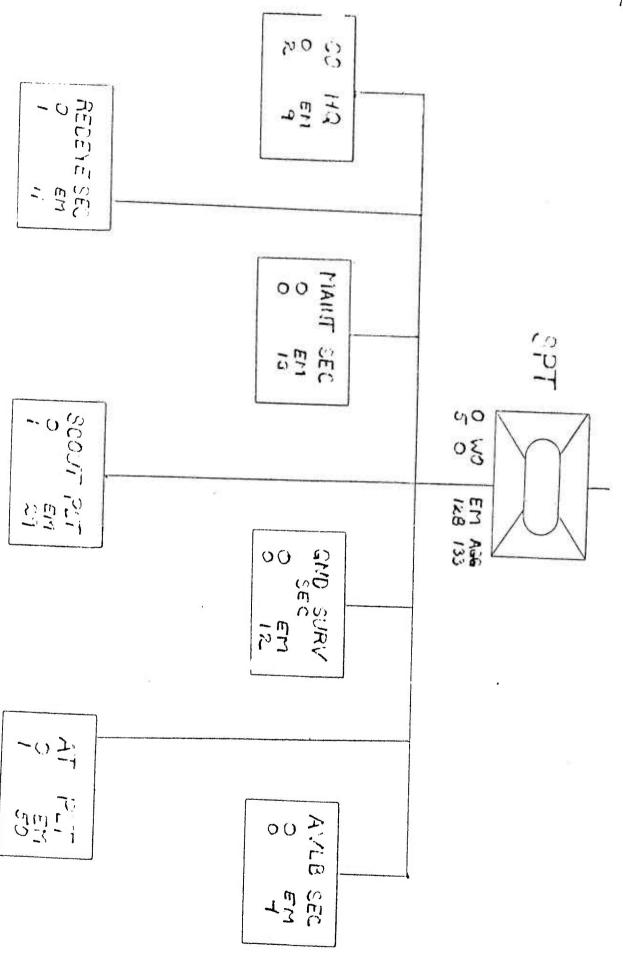
1 SSG (Sec. LD 1) P 1 SPS (Gnt) P 1 SPS (Tk Dvt) P, S 1 PFC (Looder) P, S

AN/VRC-64

AN/VRC-64

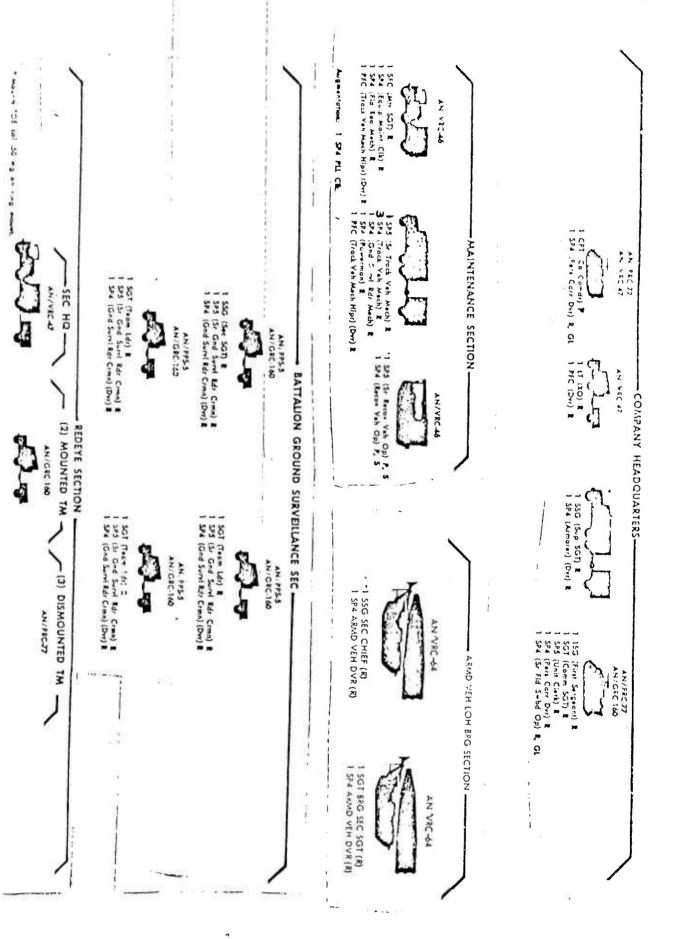
1 SSG (Ti. Comdy) P 1 SP5 (Gar) P 1 SP5 (Ti. Dv.) P, S 1 PFC (loods) P, S

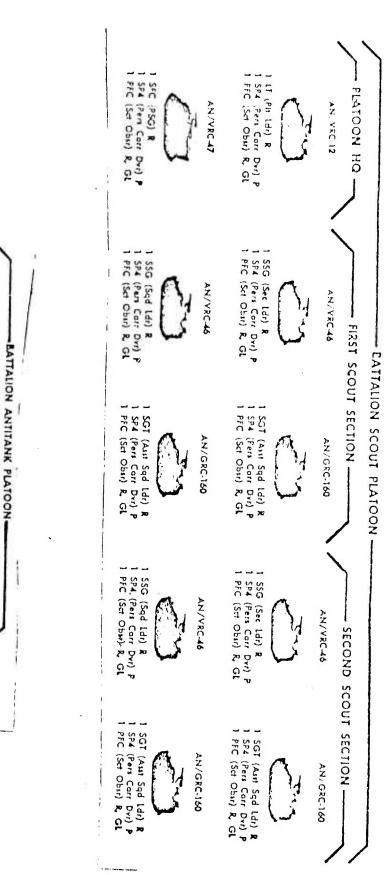




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COMBAT SUPPORT COMPANY





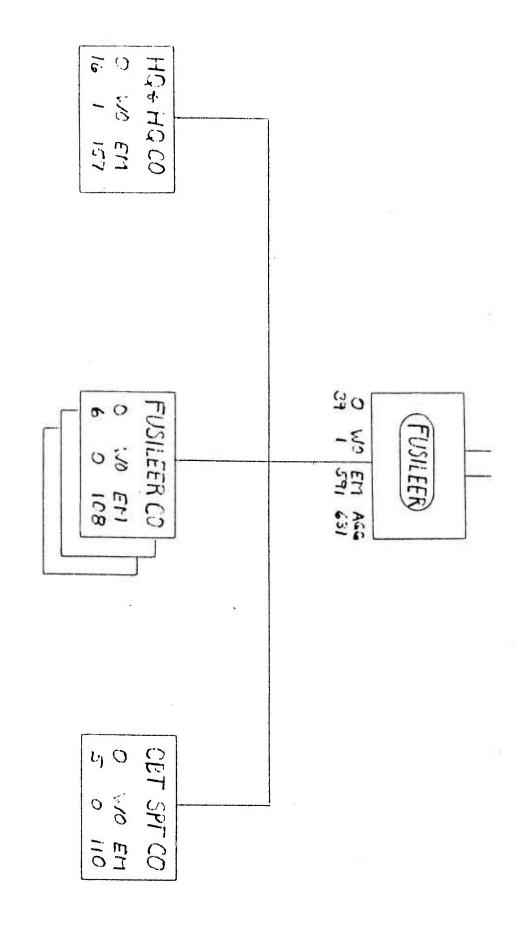
PLATOON HO

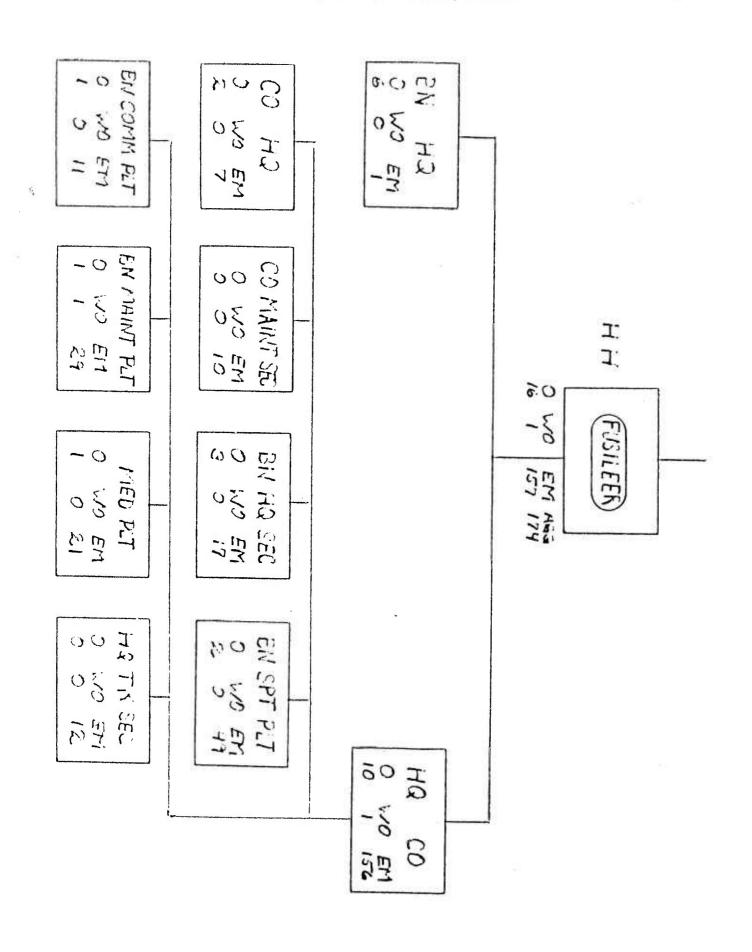
2 AN/VEC-07

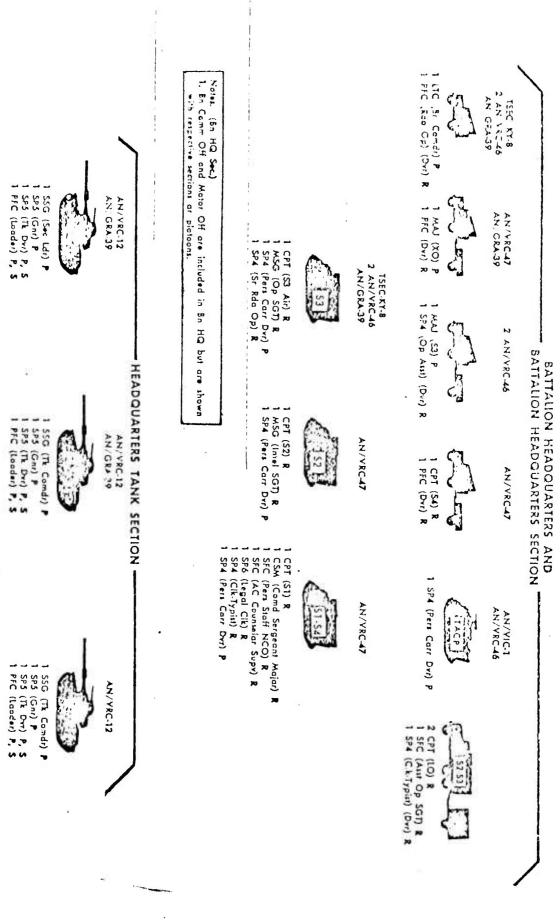
AN GRC 160

AN GR

APPENDIX B
FUSILEER BATTALION ORGANIZATION







\ .

1 CPI (Co Comdr) P AN/YRC-46 - COMPANY HEADQUARTERS 11 (XO) # 11SG (First Sergeant) # SPS (Unit Clark) # PFC (Dvr) # もと AN/YEC-64 1 SSG (Sup SGT) & 1 SP4 (Armorer) & 1 PFC (Sup Clt) (Dvr) &

- COMPANY MAINTENANCE SECTION -

1 SFC (Mater SGT) R 1 SP4 (Equip Records Clk) (Dyr) R

1 SP5 (Sr Trock Veh Mech) R 2 SP4 (Trock Veh Mech) R 1 PFC (Trock Veh Mech Hipr)(Dvr) R



2 SP4 (Track Veh Mech) R 1 PFC (Track Veh Mech Hipr) (Dvr) R





1 SP4 (Wrecker Op) R

- BATTALION COMMUNICATION PLATOON -

AN/GRA39

PFC (Mage) (Dvr)

Note, Comm Off is asgd to Bn HQ.

1 CPT (Comm Off) R 1 SP4 (Fid Rdo Mach) (Drr) R

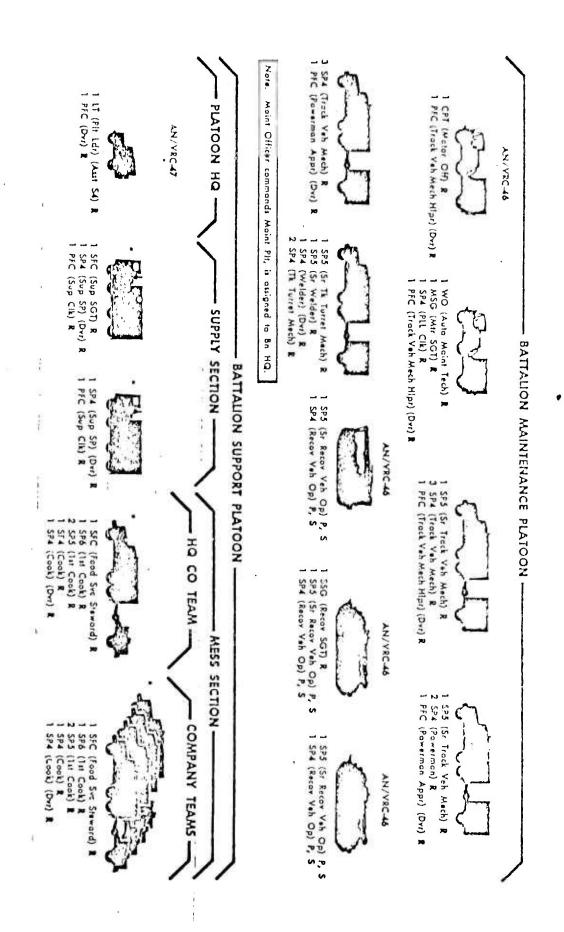


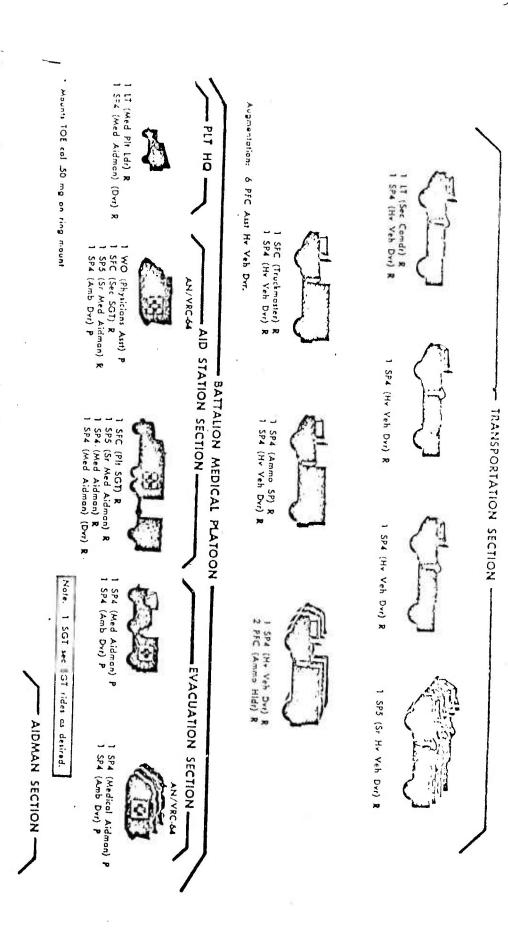
PFC (Mug CIE) R



AN/GRAGE AN/YRC-46 AN/YSC-3

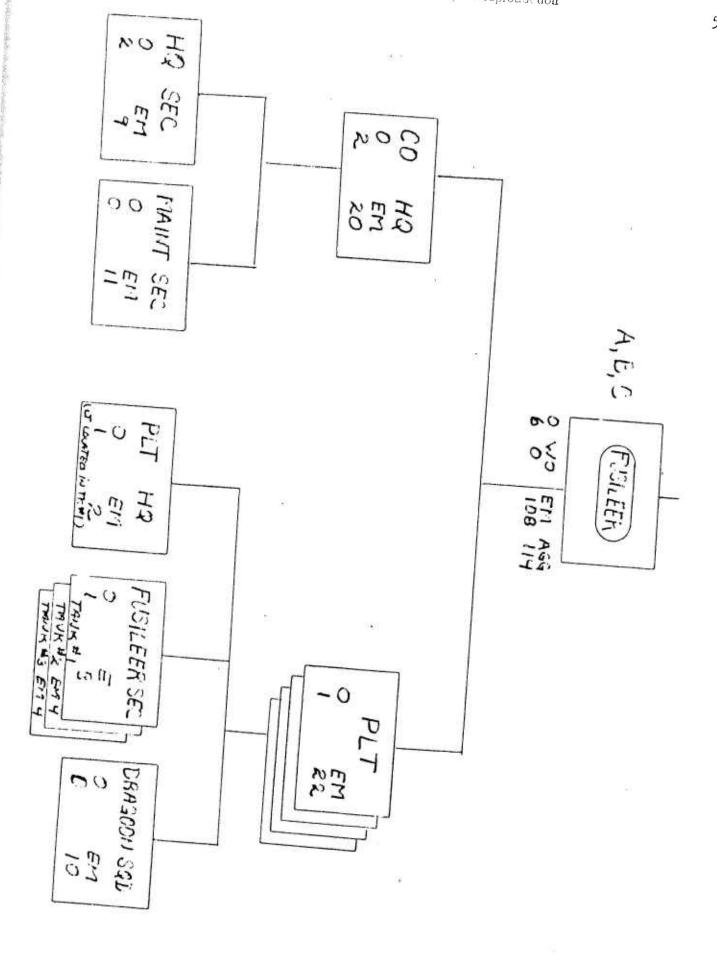
1 SSG (Comm Chief) R 1 SGT (RATT Tm Chief) R 1 SP4 (Rodor Mech) R 2 SP4 (RATT Op) R 1 SP4 (Peri Corr Dr) P



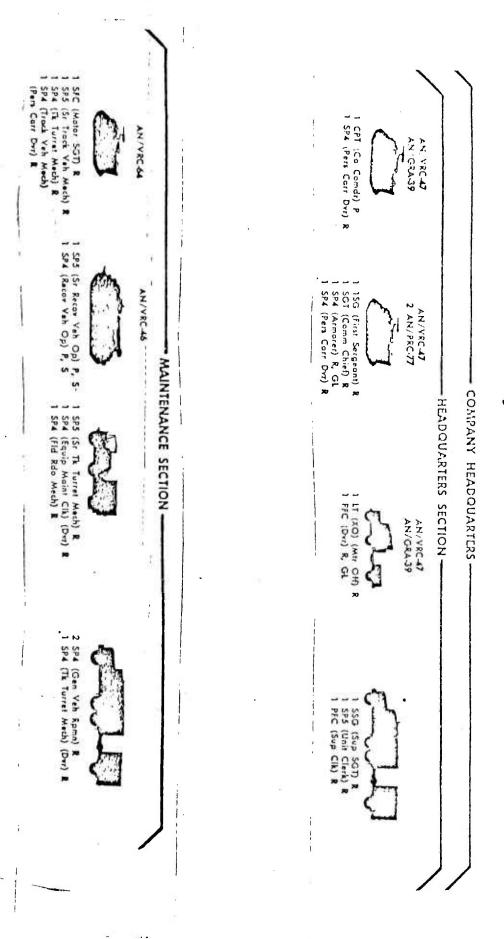


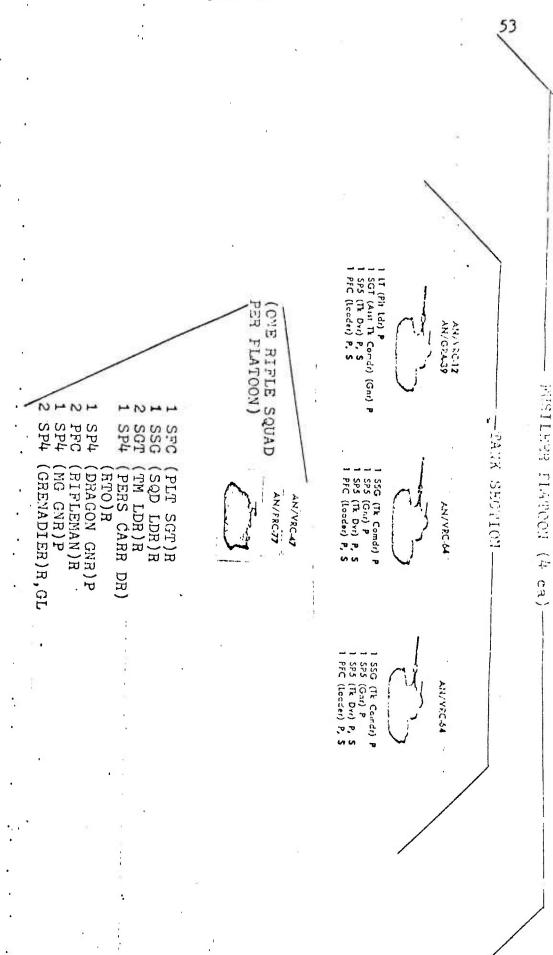
3 SPS (Co Aidmon) P

Ð

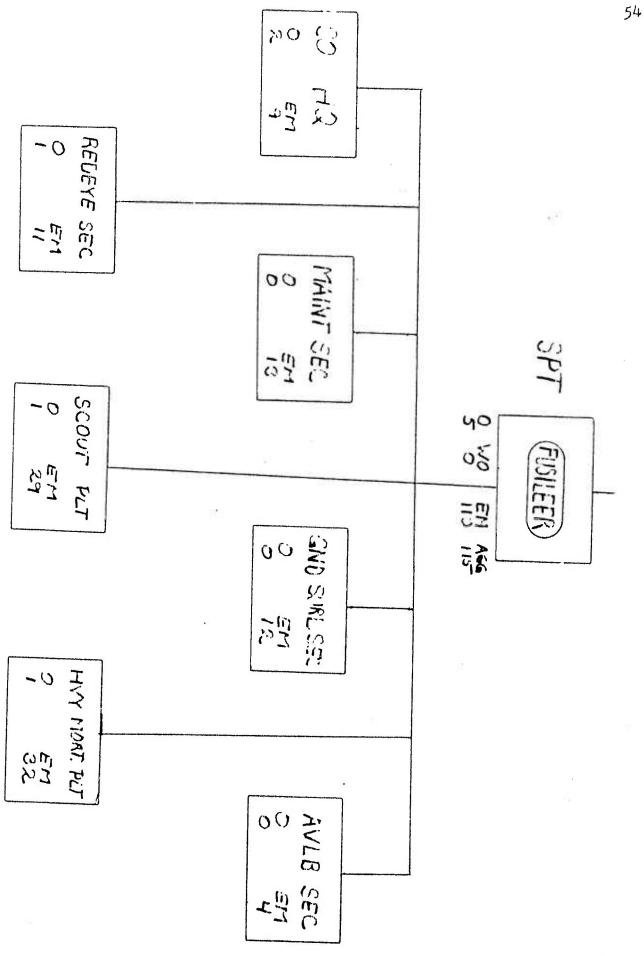


FUSILEER COMPANY (3) PER BN

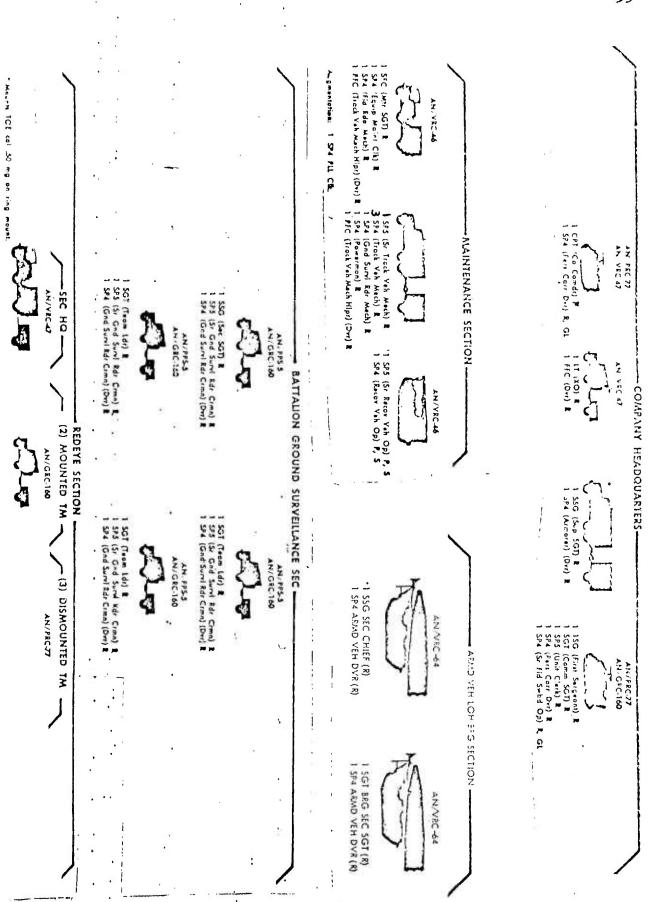


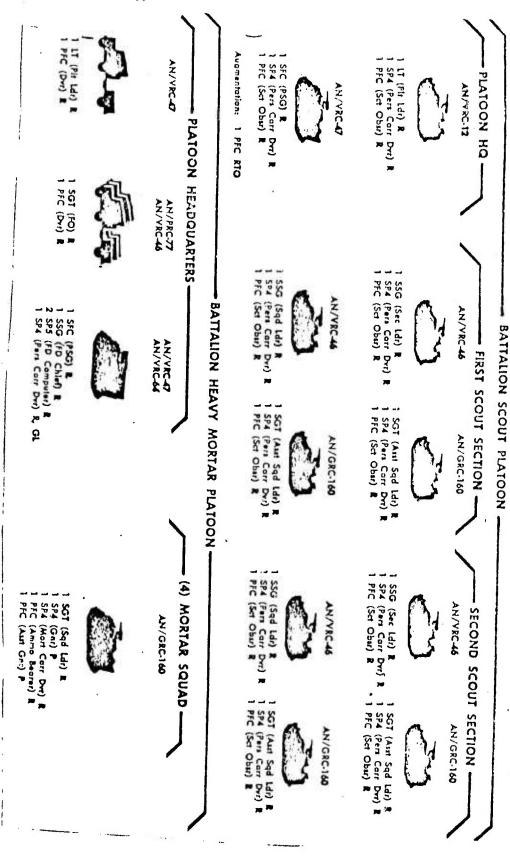






COMBAT SUPPORT COMPANY





APPENDIX C FIRE POWER COMPUTATIONS

DRAGOON BATTALION MODEL

| TYPE WPN | NO WPNS | FP/W | 300m PN TOT | FP/Wi | 500m PN TOT | | 700m PN TOT | | 00m PN TOT |
|----------------------------------|---------------------|------------------------------|---------------------------|----------------------|---------------------------|----------------------|---|----------------------|---------------------------|
| M60A1 M113A1 M114A1 TOW | 22 54 9 18 | 32 10 1 5 60 | 704 540 135 1080 | 32 10 15 60 | 704 540 135 1080 | 32 10 15 60 | 704 540 1 35 1 080 | 30 10 15 60 | 660 540 135 1080 |
| DRAGON | 27 | 50 | 1350 | 50 | 1350 | 50 | 1350 | 50 | 1350 |
| LAW 81mm | 66 9 | 12 | 330 1 08 | 12 | 108 | 12 | 108 | 12 | 108 |
| M60 | 23 | 6 | 138 | • 6 | 138 | 6 | 138 | 6 | 138 |
| M16 | 329 | 1 | 329 | .5 | 164 | 900 | - | - | - |
| M203 | 86 | 5 | 430 | - | ••• | *** | _ | - | - |
| TOTALS. | | | 5144 | | 4219 | | 4055 | | 4011 |

AVERAGE: 4357.25

FUSILEER BATTALION MODEL

| TYPE WPN | NO WPNS | FP/W | 300m PN TOT | | 500m PN TOT | | 700m PN TOT | 10 FP/W | OOm PN TOT |
|--|----------------------------|---------------------------|-------------------------------|---------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|
| M60A1 M113A1 M114A1 TOW DRAGON | 36 22 9 | 32 10 15 - 50 | 1152 220 135 800 | 32 10 15 - 50 | 1152 220 135 800 | 32 10 15 - 50 | 1152 220 135 - 800 | 30 10 15 - 50 | 1080 220 135 - 800 |
| LAW 4.2" M60 M16 M203 | 44 4 13 180 41 | 15 6 1 5 | 220 60 78 180 205 | 15 6 •5 | 60 78 90 | 15 6 | - 60 78 - | 15 6 - | - 60 78 - |
| TOTALS. | | | 3050 | | 2445 | | 2355 | | 2283 |

AVERAGE: 2533.25

US MECHANIZED INFANTRY BATTALION MODEL

| C | | | | | | | | | |
|---|--|---|---|--|--|---|--|------------------|--|
| TYPE WPN | NO WPNS | FP/W | 300m IPN TOT | FP/ | 500m WPN TOT | FP/L | 700m | 10 | 000m |
| M60A1 M113 M114 TOW DRAGON LAW 4.2" 81mm M60mg M203 M16 | 0 55 12 18 31 74 49 99 534 | 10 15 60 50 5 15 12 6 5 | 550 180 1080 1550 370 60 108 294 495 534 | 10 15 60 50 - 15 12 6 | 550 180 1080 1550 60 108 294 | FP/W 10 15 60 50 15 12 6 | 550 180 1080 1550 60 108 294 | FP/h 10 15 60 50 | 750 180 1080 1550 60 108 294 |
| AMEDACE | | | 5221 | • • • • • | .4089 | • • • • • • | 3822 | • • • • • • | .3822 |

AVERAGE: 4239

US MECHANIZED TASK FORCE MODEL

| TYPE WPN | NO WPNS | FP/h | 300m IPN TOT | FP/W | 500m PN TOT | FP/W | 700m IPN TOT | 10 FP/W | OOm moon |
|---|---|---|--|--|--|--------------------------------|---|---|--------------------------------------|
| M60A1 M113 M114 TOW DHAGON LAW 4.2" 81mm M60mg M203 M16 | 17 42 11 16 22 56 4 6 33 76 375 | 32 10 15 60 50 5 15 12 6 5 | 544 420 165 960 1100 280 60 72 198 380 375 | 32 10 15 60 50 - 15 12 6 | 544 420 165 960 1100 -60 72 198 -187 | 32 10 15 60 50 | 544 420 165 960 1100 60 72 198 | 30 10 15 60 50 15 12 6 | 510 420 165 960 1100 |
| A Trram | | | | | - , , , , , | | •• | | 3485 |

AVERAGE: 3816

US ARMOR BATTALION MODEL

| TYPE WPN | NO WPNS | FF/V | 300m JPN TOT | FP/W | 500m PN TOT | <u>FP/W</u> | 700m PN TOT | 10 FP/W | OOm PN TOT |
|---|---|---|--|---|-------------------------------------|---------------------------------|--|--------------------------------------|---------------------------------------|
| M60A1 M113 M114A1 TOW DRAGON LAW 4.2" M60 M203 M16 | 51 9 -4 20 4 1 18 30 | 32 10 15 50 5 15 6 5 | 1632 40 135 200 100 60 6 90 30 | 32 10 15 - 50 - 15 6 | 1632 40 135 200 60 6 | 32 10 15 50 15 6 | 1632 40 135 200 - 60 6 | 30 10 15 50 - 15 6 | 1530 40 135 200 -60 -6 |
| - 0 100 100 | OTALS2193219821832081 | | | | | | | | |

AVERAGE: 2188.75

US TANK TASK FORCE MODEL

| TYPE WPN | NO WPNS | FP/w | 300m IPN TOT | FP/W | 500m PN TOT | FP/W | 700m PN TOT | 10 FP/W | OOm PN TOT | |
|---|--|---|--|---|---|---|--|--|--|--|
| M60A1 M113 M114 TOW DRAG LAW 4.2" 81mm M60mg M203 M16 TOTALS. | 34 17 10 2 13 38 4 3 17 41 189 | 32 10 15 60 50 5 15 12 6 5 | 1088 170 150 120 650 190 60 36 102 205 189 | 32 10 15 60 50 15 12 6 | 1088 170 150 120 650 -60 36 102 -94 | 32 10 15 60 50 15 12 6 | 1088 170 150 120 650 - 60 36 102 | 30 10 15 60 50 - 15 12 6 | 1020 170 150 120 650 - 60 36 102 | |
| | TOTALS2960247023762308 | | | | | | | | | |

AVERAGE: 2526

SOVIET MOTORIZED RIFLE TASK FORCE MODEL*

| WPN WPNS FP/WP | | FP/WP | N TOT | | 700m PN TOT | FP/W | OOm <u>PN TOT</u> |
|--|--|--------------------------------------|------------------------------|--------------------------------------|--|---------------------------------|---|
| T62 10 34 BMP 30 22 SAGGER 32 55 SFG-9 2 30 BPG-7 28 5 120mm 6 20 MG PKS 27 6 AKM 289 1 TOTALS | 340 660 1650 60 140 180 162 289 | 34 22 55 30 - 20 6 | 340 660 1650 60 | 34 22 55 30 - 20 6 | 340 660 1650 60 180 162 | 32 22 55 30 20 6 | 320 660 1650 60 - 180 162 |

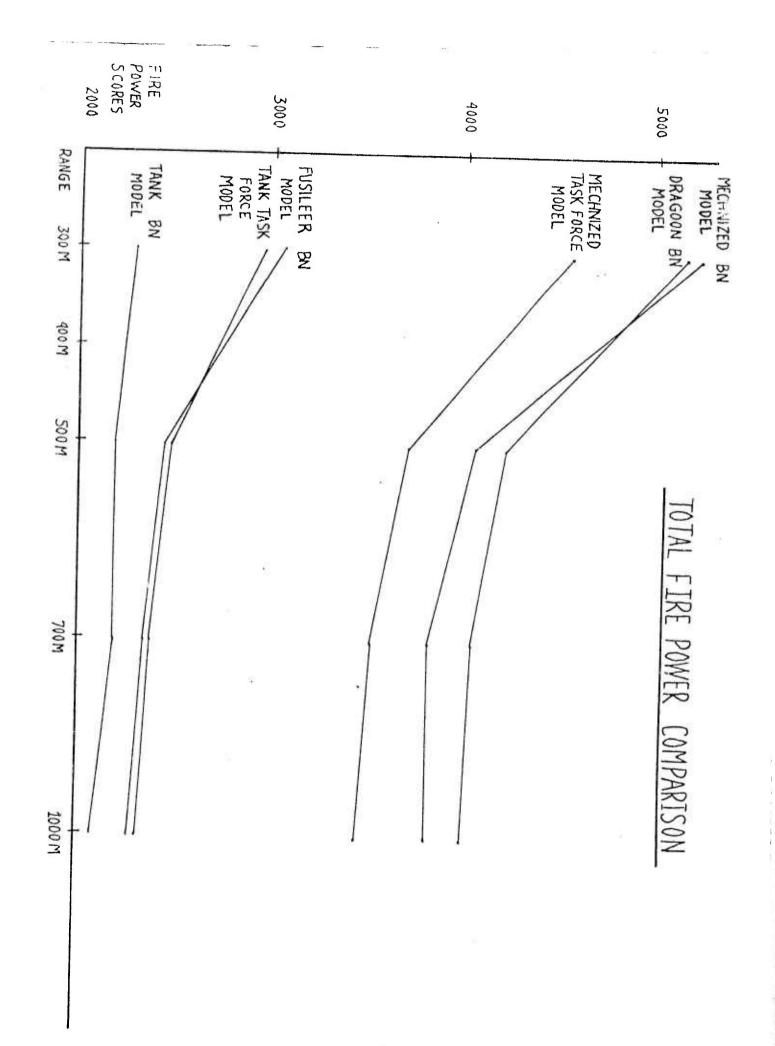
AVERAGE: 3190

SOVIET TANK BATTALION MODEL

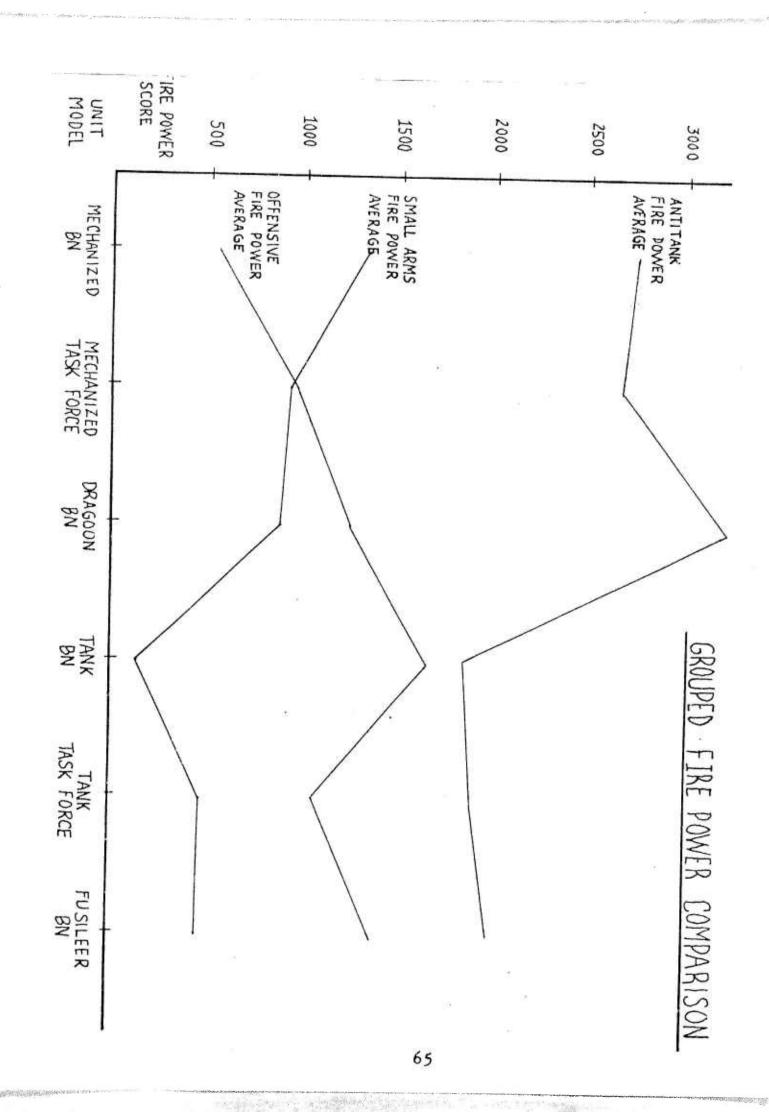
| | | | | • | | | | | |
|-------------|----------|-----------|-----------------|----------|-----------------|----------|----------------|-------------|----------------|
| TYFE WPN | NO WPNS | FP/I | 300m WPN TOT | FP/w | 500m IPN TOT | | OOm IPN TOT | | OOm IPN TOT |
| T62 BMP | 31 2 | 34 22 | 1054 44 | 34 22 | 1054 44 | 34 22 | 1054 44 | 32 22 | 992 44 |
| TOTA | LS | • • • • • | 1098 | ••••• | 1098 | | 1098 | • • • • • • | 1036 |
| | RAGE: 10 | | | | | | | | |

^{*}CONSISTS OF A MOTORIZED RIFLE BATTALION AND AN ATTACHED TANK COMPANY.

APPENDIX D
TOTAL FIRE POWER COMPARISON



APPENDIX E
GROUPED FIRE POWER COMPARISON



APPENDIX F
FIRE POWER COMPARISON SUMMARY

FIRE POWER COMPARISON SUMMARY

| TYPE MODEL | AVERAGE TOTAL | ARMORED VEHICLE | ANTITANK | SMALL ARMS |
|---|------------------------------|------------------------------|------------------------------|-----------------------|
| 1110 1:005 | FIRE POWER | FIRE POWER | FIRE POWER | FIRE POWER |
| MECHANIZED INFANTRY BATTALION MECHANIZED TASK FORCE DRAGOON BATTALION SOVIET MOTORIZED TASK FORCE | 4239 3816 4357 | 550 955 1233 | 2722 2665 3205 | 1323 953 897 |
| | 3190 | 1000 | 2080 | 591 |
| ARMOR BATTALION ARMOR TASK FORCE FUSILEER BATTALION SOVIET TANK BATTALION | 2189 2526 2533 1038 | 1646 1071 1354 1038 | 1831 1888 1989 1038 | 126 486 463 |
| # DRAGOON BATTALION SURF | PASSES COMPAI | FATIVE FORCE | MODELS . | |
| MECHANIZED INFANTRY EATTALION MECHANIZED TASK FORCE SOVIET MOTORIZED TASK FORCE | 3% 14% | 124% 29% | 18% 20% | - 32% - 6% |
| · | 37% | 2 68% | 54% | 52% |
| % FUSILEER BATTALION SU | RPASSES COMF | ARATIVE FORC | E MODELS | <i>p</i> = <i>r</i> = |
| ARMOR BATTALION ARMOR TASK FORCE SOVIET TANK BATTALION | 16% 0% 144% | -18% 26% 30% | 9% 5% 92% | 267% - 5% |

NOTES

NOTES '

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